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Five Year Plan, fire control in Alaska.

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FIVE YEAR PROTECTION PROGRAM FOR ALASKA

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FIVE YEAR PLAN
FIRE CONTROL IN ALASKA
1965 - 1969

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FIVE YEAR PLAN
FIRE CONTROL IN ALASKA
1965 - 1969

I. INTRODUCTION

Lands requiring protection by BLM includes 224 million acres, or an area approximately 7 times larger than Pennsylvania. This area extends over a region approximately 700 by 500 miles and has an extremely limited road system. The bulk of the land lies between the Brooks Range on the north and the Coastal Range on the south. The Bureau also has contractual responsibility for the State lands in Alaska. Approximately 125 million acres protected by BLM are designated as forest lands. These great predominately coniferous forests have their counterpart in northern Canada, the Scandinavian countries and northern Russia. The remaining some 100 million acres are composed for the most part of rolling hills of grass-browse and flat excessively wet lowlands. In general the country is a variety of rolling upland, broad lowlands and scattered mountain masses and peaks. The forests appear from the air as a complex mosaic of vegetative types. The forests usually occupy the valleys, often appearing as belts that follow meandering streams, sloughs and bench lands. Past fires have played a major role in determining the complexity of vegetative types. Sharp boundaries of types can usually be recognized as the edge of old burns. Many areas now treeless prove, on close examination, to have once supported forest stands that were destroyed by repeated burning. There is an estimated 350 billion board feet of timber in the interior of Alaska. This vast potential pulp wood reserve awaits only a favorable economic climate for industrial development.

Before 1940 forest and range fires ran rampant over Alaska and the Yukon Territory. Annual losses of five to eight million acres were common. By 1949 an estimated 80% of Alaska's forest and range land had been burned over. These losses have sharply tapered off since 1957 with a loss of only 16,158 acres in 1963.

Lightning has always been a big factor, but man accounts for approximately three-fourths of the number of fires in Alaska.

The Alaskan Fire Control Service was formed under the General Land Office July 1, 1939, with an appropriation of \$37,500 in organizational funds for the fiscal year. This new organization became a part of BLM in 1946. It was not until 1949 that BLM was given fire suppression funds. Appropriations have slowly increased to the present level of approximately one million dollars.

From a limited sphere of influence immediately adjacent to a few routes of ground travel, fire control since 1959 has been extended to the remote corners of the interior by an effective airborne attack. With a combination of smokejumpers and air dropped chemical retardants most all fires are hit quick, hard and kept small.

II. FIRE CONTROL PROBLEMS

Forest protection in Alaska is confronted with many problems more or less unique to this area:

A. Vastness, remoteness and lack of ground access, directly or indirectly cause most problems such as:

1. Dependence almost wholly upon air transportation with all of its limitations.
2. Lack of fixed and dependable detection system.
3. Communications breakdown during periods of poor propagation.
4. Limited ability to quickly strike large numbers of lightning fires simultaneously.
5. Limited ability to provide logistical support to a number of widely scattered fires simultaneously.
6. Western Alaska has only two main centers of supply, Anchorage and Fairbanks.

B. Climate and Fire Weather

1. Extreme variations by season and locality.
2. Long daylight hours, with low diurnal change of temperature.
3. Sixty- to eighty-day lightning season with frequent dry lightning storms.
4. Extreme difficulty in detecting weather effect in time to brace for it.
5. Low precipitation in interior.

C. Fuels: Boreal Zone

1. Full crowned black and white spruce with lower branches extending into the surface moss.
2. Carpet of highly flammable moss and lichens.

These features combine to assure that most any fire becomes a fast spreading crown fire.

D. Suppression

1. Intense burning and rapid spread limit opportunities for direct attack to small fires or fires cooled down.
2. Indirect attack usually necessary on running fires.
3. Fires burn hard all night.
4. Use of heavy equipment is a rare luxury.
5. Necessity for hand labor on fire lines.
6. Long hauls of retardants and smokejumper for initial attack.
7. Fires often large when discovered or at time of initial attack.

E. Mopup

1. Long and tedious as fires burn deep and smolder in tundra and peatmoss.
2. No dirt available for suppression or mopup.

F. Manpower

1. Lack of sufficient readily available source of manpower.
2. Native villages are remote, scattered and small:
3. Other labor in Alaska usually not available during fire season.

III. NECESSITY FOR PROTECTION

- A. Protection of the interior vast pulp wood reserve which will inevitably be needed by the nation in a century or less.
- B. Protection of watershed values.
- C. Protection of wildlife and reindeer forage (moss and lichens) and habitat.
- D. Protection of waterfowl nesting grounds.
- E. Protection of aesthetic and recreational values.
- F. Keeping air free of smoke pall for national defense and for general visibility.

IV. OBJECTIVES

To develop a protection organization for the "normal year" which will meet both short and long-term resource protection needs of the state and union. The normal fire year organization whether by district or state is that needed during a normal fire season to adequately, economically control fire loss within the burn standard (that loss which can be suffered by the unit without deleterious effect on the perpetual yield base of the natural resources). The goal as a burn standard in Alaska at the present time is set at 100,000 acres or less per year.

Abnormal fire years frequently develop in specific fire districts or on a regional basis and have developed on a state-wide basis. Under these conditions personnel and equipment can be moved to active districts from less-active--thus assuring continued adequate fire control efforts. Should conditions continue to worsen beyond the normal organization's ability to handle, then such emergency measures can be taken when, where, and to the degree necessary to retain control.

We have not attained the normal year organization in Alaska. Consequently emergency funds have been called into use much quicker and for longer periods of time than would be the case with full normal year organization. However, this does not "even up" with the normal year organization because of inadequate numbers of trained and experienced personnel to competently handle the emergency organization needed to meet the fire situation. Typically the emergency fire force is utilized to a certain point (within capabilities of regular organization) to adequately supervise and then hold at a useable level. An often overlooked facet of the problem is the lack of depth of permanent personnel with sufficient experience to run the fire organization, train and supervise the seasonal fire overhead. The latter may return 1 or 2 seasons, but usually a 50 to 70% turnover occurs each year. New men cannot be expected to handle complex fire problems nor fully utilize EFF potential assistance without adequate supervisory overhead; hence, use of EFF is limited by individual fires to the FCA's capabilities.

The five year organization plan levels off once the normal fire year organization is reached. There is little expansion or change planned after that point. Full normal year strength is again programmed for FY 1966.

The means of attaining these objectives are spelled out in detail in the district and state annual fire and program plans.

TABLE 1

10422
11-P PERMANENT POSITIONS

<u>GRADE</u>	<u>1965</u>		<u>1966</u>		<u>1967</u>		<u>1968</u>		<u>1969</u>	
	<u>Pos.</u>	<u>MM</u>	<u>Pos.</u>	<u>MM</u>	<u>Pos.</u>	<u>MM</u>	<u>Pos.</u>	<u>MM</u>	<u>Pos.</u>	<u>MM</u>
<u>DIVISION OF RESOURCE MANAGEMENT - STATE OFFICE</u>										
GS-13	2		2		2		2		2	
GS-12	1		1		1		1		1	
GS-11	$\frac{2}{5}$		$\frac{2}{5}$		$\frac{2}{5}$		$\frac{2}{5}$		$\frac{2}{5}$	
Total	5	60	5	60	5	60	5	60	5	60
<u>REIMBURSABLE POSITIONS</u>										
GS-9	2		2		2		2		2	
GS-7	2		2		2		2		2	
Ung.	$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$	
Total	5	60	5	60	5	60	5	60	5	60
<u>AIRCRAFT OPERATION</u>										
GS-13	1		2		2		2		2	
GS-12	2		3		3		3		3	
GS-11	3		1		1		1		1	
GS-5	1		1		1		1		1	
Ung.	$\frac{2}{9}$		$\frac{4}{11}$		$\frac{4}{11}$		$\frac{4}{11}$		$\frac{4}{11}$	
Total	9	108	11	132	11	132	11	132	11	132
<u>DISTRIBUTIVE (ENTIRE STATE)</u>										
Various	97		110		110		110		110	
<u>ANCHORAGE DISTRICT</u>										
GS-12	1		1		1		1		1	
GS-11	4		4		4		4		4	
GS-9	1		1		1		1		1	
GS-7	2		2		2		2		2	
GS-4	2		2		2		2		2	
GS-3	1		1		1		1		1	
Ung.	$\frac{3}{14}$		$\frac{3}{14}$		$\frac{3}{14}$		$\frac{3}{14}$		$\frac{3}{14}$	
Total	14	168	14	168	14	168	14	168	14	168
<u>FAIRBANKS DISTRICT</u>										
GS-12	1		1		1		1		1	
GS-11	2		2		2		2		2	
GS-9	6		6		6		6		6	
GS-7	1		1		1		1		1	
GS-4	1		1		1		1		1	
GS-3	1		1		1		1		1	
Ung.	$\frac{3}{15}$		$\frac{3}{15}$		$\frac{3}{15}$		$\frac{3}{15}$		$\frac{3}{15}$	
Total	15	180	15	180	15	180	15	180	15	180
Total 11P	48	673	50	710	50	710	50	710	50	710

TABLE 2

10422
11-T TEMPORARY POSITIONS

	<u>1965</u>		<u>1966</u>		<u>1967</u>		<u>1968</u>		<u>1969</u>
	<u>Pos.</u>	<u>MM</u>	<u>Pos.</u>	<u>MM</u>	<u>Pos.</u>	<u>MM</u>	<u>Pos.</u>	<u>MM</u>	<u>Pos.</u>
<u>DIVISION OF RESOURCE MANAGEMENT - STATE OFFICE</u>									
GS-3	1	6	1	6	1	6	1	6	1
<u>REIMBURSABLE POSITIONS</u>									
Anchorage	5	68	5	68	5	68	5	68	5
Fairbanks	<u>13</u>	<u>26</u>	<u>13</u>	<u>26</u>	<u>13</u>	<u>26</u>	<u>13</u>	<u>26</u>	<u>13</u>
Total	18	94	18	94	18	94	18	94	18
<u>AIRCRAFT OPERATION</u>									
IASS	10	64	8	40	11	76	8	40	8
<u>ANCHORAGE DISTRICT</u>									
Various									
IASS & GS	18	99	30	161	30	161	30	161	30
<u>FAIRBANKS DISTRICT</u>									
Various									
IASS & GS	36	184	58	302	58	302	58	302	58
Total 11T	83	447	115	603	118	639	115	603	118

TABLE 3

10422
OTHER COSTS

<u>OBJECT</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>
<u>DIVISION OF RESOURCE MANAGEMENT - STATE OFFICE</u>					
21	12,750	12,750	12,750	12,750	12,750
22	4,000	4,000	4,000	4,000	4,000
23	5,000	5,000	5,000	5,000	5,000
24	600	600	600	600	600
25	1,000	1,000	1,000	1,000	1,000
26	750	750	750	750	750
31	900	900	900	900	900
Total	25,000	25,000	25,000	25,000	25,000
<u>AIRCRAFT OPERATION</u>					
21	15,600	15,600	15,600	15,600	15,600
22	1,500	1,500	1,500	1,500	1,500
23	12,800	12,800	12,800	12,800	12,800
24	100	100	100	100	100
25	35,000	35,000	120,000	35,000	35,000
26	88,000	88,000	90,000	90,000	90,000
31		18,000		18,000	18,000
Total Need	153,000	171,000	240,000	173,000	173,000
10422	95,000	95,000	162,000	95,000	95,000
Air Use Reimb. (est.)	58,000	76,000	78,000	78,000	78,000
<u>COMMUNICATION</u>					
21	2,600	2,600	2,600	2,600	2,600
22					
23	600	600	600	600	600
24					
25	2,000	2,000	2,000	2,000	2,000
26	3,800	3,800	3,800	3,800	3,800
31	22,000	22,000	22,000	22,000	22,000
Total	31,000	31,000	31,000	31,000	31,000
<u>TOTAL OTHER DISTRIBUTIVE</u>					
	31,000	32,000	33,000	34,000	34,000

TABLE 4

10422
OTHER COSTS

<u>OBJECT</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>
<u>ANCHORAGE DISTRICT</u>					
21	16,500	16,500	16,500	16,500	16,500
22	7,500	7,500	7,500	7,500	7,500
23	11,300	11,300	11,300	11,300	11,300
24	2,000	2,000	2,000	2,000	2,000
25	9,200	9,200	9,200	9,200	9,200
26	39,500	36,500	36,500	36,500	36,500
31	<u>10,000</u>	<u>13,000</u>	<u>13,000</u>	<u>13,000</u>	<u>13,000</u>
Total	96,000	96,000	96,000	96,000	96,000
<u>FAIRBANKS DISTRICT</u>					
21	17,500	20,000	20,000	20,000	20,000
22	8,800	10,000	10,000	10,000	10,000
23	8,400	10,000	10,000	10,000	10,000
24	500	1,000	1,000	1,000	1,000
25	7,500	27,000	39,500	39,500	39,500
26	40,300	48,000	22,500	22,500	22,500
31	<u>16,000</u>	<u>54,000</u>	<u>15,000</u>	<u>15,000</u>	<u>15,000</u>
Total	99,000	170,000	118,000	118,000	118,000
Total Other	377,000	449,000	465,000	399,000	399,000

TABLE 5

SUMMARY
5-YEAR PLAN
FIRE CONTROL PROGRAM - 10422

<u>ACTIVITY</u>	<u>1965</u>		<u>1966</u>		<u>1967</u>		<u>1968</u>		<u>1969</u>	
	<u>Pos.</u>	<u>MM</u>	<u>Pos.</u>	<u>MM</u>	<u>Pos.</u>	<u>MM</u>	<u>Pos.</u>	<u>MM</u>	<u>Pos.</u>	<u>MM</u>
<u>11-P</u>										
DIV. OF RM	5	60	5	60	5	60	5	60	5	60
REIMB. POSITIONS	5	60	5	60	5	60	5	60	5	60
AIRCRAFT OPS.	9	108	11	132	11	132	11	132	11	132
DISTRIBUTIVES		97		110		110		110		110
ANCH. DIST.	14	168	14	168	14	168	14	168	14	168
FBX. DIST.	<u>15</u>	<u>180</u>	<u>15</u>	<u>180</u>	<u>15</u>	<u>180</u>	<u>15</u>	<u>180</u>	<u>15</u>	<u>180</u>
TOTAL 11-P	48	673	50	710	50	710	50	710	50	710
<u>11-T</u>										
DIV. OF RM	1	6	1	6	1	6	1	6	1	6
REIMB. POS.	18	94	18	94	18	94	18	94	18	94
AIRCRAFT OPS.	10	64	8	40	11	76	8	40	8	40
ANCH. DIST.	18	99	30	161	30	161	30	161	30	161
FBX. DIST.	<u>36</u>	<u>184</u>	<u>58</u>	<u>302</u>	<u>58</u>	<u>302</u>	<u>58</u>	<u>302</u>	<u>58</u>	<u>302</u>
TOTAL 11-T	83	447	115	603	118	639	115	603	118	603
TOTAL PERSONNEL COSTS										
	806,000		960,000		996,000		956,000		956,000	
<u>OTHER</u>										
DIV. OF RM	25,000		25,000		25,000		25,000		25,000	
AIRCRAFT OPS.	95,000		95,000		162,000		95,000		95,000	
COMMUNICATION	31,000		31,000		31,000		31,000		31,000	
OTHER DISTRIB.	31,000		32,000		33,000		34,000		34,000	
ANCH. DIST.	96,000		96,000		96,000		96,000		96,000	
FBX. DIST.	<u>99,000</u>		<u>170,000</u>		<u>118,000</u>		<u>118,000</u>		<u>118,000</u>	
TOTAL	377,000		449,000		465,000		399,000		399,000	
TOTAL COSTS										
	1,183,000		1,409,000		1,461,000		1,355,000		1,355,000	

NORMAL UNIT STRENGTH (NUS)

Normal Unit Strength (NUS) is defined as "that number of men and quantity of equipment, expressed as a man unit, required to maintain fire loss below the maximum allowable burn within the protection zone during a year of normal fire occurrence, severity and distribution". Normal Unit Strength (NUS) should not be confused with Current Unit Strength (CUS). Current Unit Strength may be defined as "that number of men and quantity of equipment, expressed as a man unit, available at a given time".

As Alaska develops and/or the weather cycle fluctuates, changes in the fire pattern, i.e., distribution, severity, etc., will accompany these developments resulting in a changing "normal fire year".

Technological improvements in fire control equipment and techniques will result in changes in the number of men and both the quantity and type of equipment programmed. Similarly, changes in the allowable fire loss will be reflected in changing NUS levels.

The NUS level is determined by each Fire District, the basis for determination being past fire history, current fire trends and anticipated future needs. The distribution of NUS within each district is based on local requirements and inventory levels.

NUS levels have been programmed for increase through 1966 on the Anchorage District and through 1968 on the Fairbanks District. The NUS of 1,570 and 1,325 at Anchorage and Fairbanks respectively will allow for decentralization of equipment to strategic sites in the field while maintaining an adequate NUS at the fire district level.

The above NUS figures do not include the requirements of the smokejumper contingent operating from the Fairbanks District. Experience indicates that under normal operations equipment for four turns per smokejumper is necessary to secure maximum utilization of this force. Equipment requirements for additional smokejumpers in periods of emergency can be provided from the District NUS inventories.

While specific levels have been set up by each district it is anticipated that improvements in detection, communication, transportation, and suppression equipment and techniques will increase the effectiveness of the NUS levels established.

TABLE 7

ANCHORAGE DISTRICT
PROGRAMMED NORMAL UNIT STRENGTH

FIRE DISTRICTFIRE GUARD DISTRICTFIRE TOOL CACHE

	1964	1965	1966	1967	1968	1969
ANCHORAGE FIRE DISTRICT (TOTAL)	685	685	685	685	685	685
ANCHORAGE FIRE GUARD DISTRICT	400	400	400	400	400	400
CANTWELL	25	25	25	25	25	25
TALKEETNA	25	25	25	25	25	25
ILIAMNA	50	50	50	50	50	50
KING SALMON	25	25	25	25	25	25
DILLINGHAM	25	25	25	25	25	25
HAINES	25	25	25	25	25	25
HOMER GUARD DISTRICT	60	60	60	60	60	60
SKILAK GUARD DISTRICT	50	50	50	50	50	50
MCCRATH FIRE DISTRICT (TOTAL)	575	625	675	675	675	675
MCCRATH WAREHOUSE	300	300	350	350	350	350
BETHEL	50 ^{1/}	50	50	50	50	50
ANIAK	25	50	50	50	50	50
FLAT	50	50	50	50	50	50
SPARREVOHN	25	25	25	25	25	25
HOLY CROSS	25	25	25	25	25	25
MINCHUMINA	25	50	50	50	50	50
UNALAKLEET	25	25	25	25	25	25
RED DEVIL	50 ^{2/}	50	50	50	50	50
GLENNALLEN FIRE DISTRICT (TOTAL)	115	160	160	160	160	160
GLENNALLEN FIRE GUARD DISTRICT	80	100	100	100	100	100
SLANA	10	10	10	10	10	10
LAKE LOUISE FIRE GUARD DISTRICT	25	50	50	50	50	50
FINGER LAKE FIRE DISTRICT (TOTAL)	50	50	50	50	50	50
ANCHORAGE DISTRICT TOTAL	1325	1520	1570	1570	1570	1570

^{1/} Increased from 25 to 50, FY 1964.

^{2/} Established FY 1964.

TABLE 8

FAIRBANKS DISTRICT
PROGRAMMED NORMAL UNIT STRENGTH

FIRE DISTRICTFIRE GUARD DISTRICTFIRE TOOL CACHE

	1964	1965	1966	1967	1968	1969
SMOKEJUMPER UNIT (TOTAL) (STATE)	200 <u>1/</u>	200	200	200	200	200
FAIRBANKS FIRE DISTRICT (TOTAL)	318	393	425	475	525	525
FAIRBANKS GUARD DISTRICT	306	381	400	450	500	500
CENTRAL GUARD DISTRICT	12	12	25	25	25	25
DELTA FIRE DISTRICT (TOTAL)	174	224	300	300	300	300
DELTA GUARD DISTRICT	50	75	100	100	100	100
NORTHWAY GUARD DISTRICT	50	50	50	50	50	50
TANACROSS GUARD DISTRICT	50	75	100	100	100	100
CHICKEN GUARD DISTRICT	12	12	25	25	25	25
EAGLE GUARD DISTRICT	12	12	25	25	25	25
FIELD FIRE DISTRICT (FAIRBANKS) (TOTAL)	350	425	425	475	500	500
TANANA	50	75	75	100	100	100
HUGHES	0	50 <u>2/</u>	100	100	100	100
FORT YUKON GUARD DISTRICT	50	100	100	100	100	100
GALENA GUARD DISTRICT	100	100	100	100	100	100
HUSLIA	100	50 <u>3/</u>	0	0	0	0
KIANA-KOBUK GUARD DISTRICT (KIANA)	50	50	50	75	100	100
FAIRBANKS DISTRICT TOTAL	1042	1242	1350	1450	1525	1525

1/ Reflects units necessary to service four (4) fire turns of fifty (50) smokejumpers.

2/ To be established in lieu of Huslia. Adequate airport and facilities.

3/ To be phased out by FY 1966 in view of inadequate facilities for air operations.

TABLE 8a

SUMMARY TABLE
PROGRAMMED NORMAL UNIT STRENGTH

ANCHORAGE FIRE DISTRICT TOTAL
FAIRBANKS FIRE DISTRICT TOTAL
ALASKA STATE TOTAL
STATE CACHES TOTAL

1964	1965	1966	1967	1968	1969
1325	1520	1570	1570	1570	1570
1042	1242	1350	1450	1525	1525
2367	2762	2920	3020	3095	3095

179 1/

1/ No NUS level is programmed for the State Caches. The level at any given time is dependent on the level of 10800 State General purchases and District 10800 purchases in excess of NUS requirements.

TABLE 9
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ALASKA

SCALE 1:12,500,000

● PERMANENT STATIONS

- 1 Anchorage
- 2 Delta
- 3 Fairbanks
- 4 Finger Lake
- 5 McGrath
- 6 Central
- 7 Chicken
- 8 Eagle
- 9 Fort Yukon
- 10 Galena
- 11 Glennallen
- 12 Homer
- 13 Lake Louise
- 14 Northway
- 15 Tanacross
- 16 Skilak

▲ SEASONAL STATIONS

- 6 Central
- 7 Chicken
- 8 Eagle
- 9 Fort Yukon
- 10 Galena
- 11 Glennallen
- 12 Homer
- 13 Lake Louise
- 14 Northway
- 15 Tanacross
- 16 Skilak

■ TOOL CACHES

- 17 Aniak
- 18 Bethel
- 19 Cantwell
- 20 Dillingham
- 21 Flat
- 22 Haines
- 23 Holy Cross
- 24 Hughes
- 25 Huslia
- 26 Iliamna
- 27 Kiana
- 28 King Salmon
- 29 Minchumina
- 30 Red Devil
- 31 Slana
- 32 Sparrevohn
- 33 Talkeetna
- 34 Tanana
- 35 Unalakleet

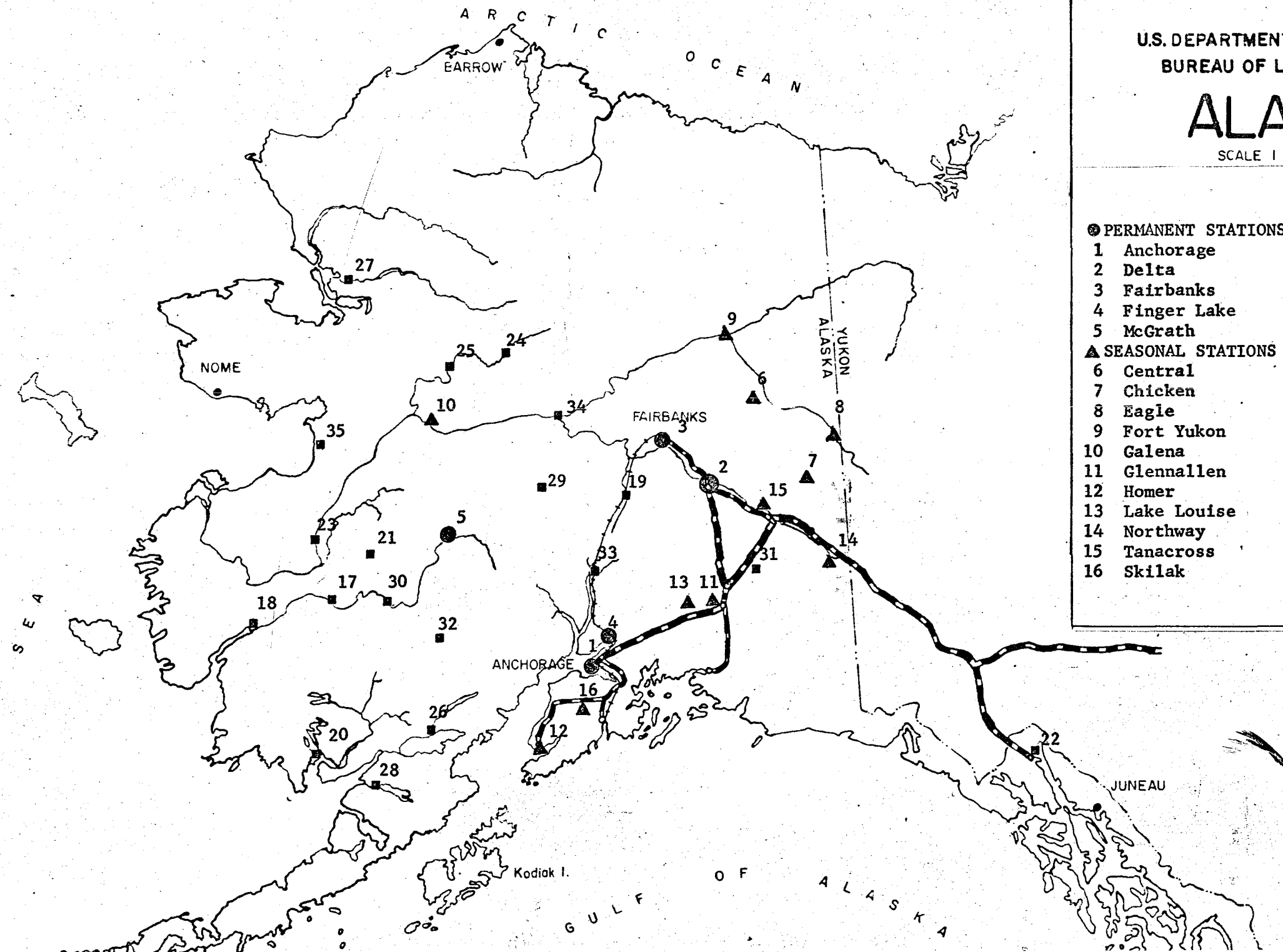


TABLE 10

AIRCRAFT REPLACEMENT SCHEDULE
BRANCH OF PROTECTION 10422

NUMBER	TYPE	MODEL YEAR	YEAR OVERHAUL
DOUG - 645	DC-3	1945	63-64-69
GRUMMAN - 640	GOOSE	1944	68
GRUMMAN - 641	GOOSE	1944	65
GRUMMAN - 642	GOOSE	1944	67
GRUMMAN - 644	GOOSE	1944	66
<u>YEAR REPLACEMENTS</u>			
51 - ECHO	CESSNA 180	1959	64
11 - TANGO	CESSNA 180	1960	67
96 - EXRAY	CESSNA 180	1961	68
91 - EXRAY	CESSNA 180	1961	69
05 - YANKEE	CESSNA 180	1962	70
06 - YANKEE	CESSNA 180	1962	71

TABLE 11

VEHICLE REPLACEMENT SCHEDULE
ANCHORAGE DISTRICT - 10422

PROPERTY NO.	TYPE	MODEL YEAR	YEAR REPLACEMENT
877	½ TON PICK UP	'57 CHEV.	1963
894	½ TON PICK UP	58 FORD	1965
819	POWER WAGON	49 DODGE	1968
944	½ TON PICK UP	60 STUD.	1966
820	POWER WAGON	49 DODGE	1968
900	STATION WAGON	58 WILLYS	1964
910	4 x 4	51 CHEV.	1965
950	3/4 TON PICK UP	60 CHEV.	1966
915	3/4 TON STAKE	59 CHEV.	1965
922	SED. DEL.	61 STUD.	1967
947	1½ TON STAKE (PUMPER)	60 CHEV.	1966
948	DUMP	60 INT.	1966
949	3/4 TON DODGE(PUMPER)	61 DODGE	1967
951	3/4 TON PICK UP	61 DODGE	1967
953	½ TON PICKUP (PUMPER)	61 FORD	1967
954	3/4 TON STAKE(HOMER)		
956	4 x 4 3/4 TON(PUMPER)	62 CHEV.	1968
957	3/4 TON PICK UP	62 CHEV.	1968
960	TRUCK TRACTOR (SURPLUS)		
		52 FORD	1968

OTHER VEHICLES HAVE BEEN TURNED OVER TO GSA MOTOR POOL
AND ARE USED ON RENTAL BASIS.

RADIO EQUIPMENT
ANTICIPATED PURCHASE & INSTALLATION

<u>STATION</u>	<u>EQUIPMENT TYPE</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>
CANTWELL	100 WATT AM-INSTAL.	1,200				
GALENA	100 WATT STN.-AM-35FM PURCHASED 64-INSTALL 65					
BETHEL	100 WATT AM-INSTAL.	1,200				
FORT YUKON	35 WATT FM	475				
PAXSON	100 WATT AM-INSTAL.					1,200
TANANA	100 WATT AM				1,200	
HUGHES	100 WATT AM					1,200
ANCH. DISP	125W-SSB-5242.5 RCS	750				
FM MOBILES-						
DIST.	35W FM (2)	1,000		1,000		1,000
FBX DISP.	125W-SSB-5242.5 RCS		750			
FM MOBILES-	75 WATT FM	550				
DIST.	35W FM (4)	1,000		1,000		1,000
ESTER DOME LO	75 WATT FM (REMOTE)			2,000		
MCCRATH	125 WATT-SSB-5242.5 RCS	750				
	REPLACE 35 WATT-75 WATT SSB	550				
	35 WATT FM MOBILE (2)	1,000				
GLENNALLEN	125 W SSB		750			
	35 W FM		550			
BIG DELTA	125 W SSB		750			
FINGER LAKE	35 W FM	550				
	125 W SSB		750			
TANACROSS	125 W SSB		750			
NORTHWAY	125 W SSB		750			
	35 W FM		475			
BORDER	125 W SB			750		
CHICKEN	125 W SSB		750			
EAGLE	125 W SSB		750			
CENTRAL	125 W SSB			750		
KWA-406	REPLACE 35 W 75W FM		550			
	125 WATT SSB 5242.5		750			
HOMER	REPLACEMENT 100W AM		750			
MOBILE, PORTABLE INSTRUMENTS		14,400	10,375	18,000	18,000	18,000
HARDING LAKE LO	75 WATT FM (REMOTE)				2,000	

TABLE 12

TABLE 13

10910
MAINTENANCE PROGRAM

		<u>1965</u>		<u>1966</u>		<u>1967</u>		<u>1968</u>		<u>1969</u>	
		<u>Pos.</u>	<u>MM</u>	<u>Pos.</u>	<u>MM</u>	<u>Pos.</u>	<u>MM</u>	<u>Pos.</u>	<u>MM</u>	<u>Pos.</u>	<u>MM</u>
<u>11-P PERMANENT POSITIONS</u>											
UNGR	FROM 10422	2	26*	2	28*	2	28*	2	28*	2	28*
<u>11-T TEMPORARY POSITIONS</u>											
		8	48	8	48	8	48	8	48	8	48
TOTAL PERSONNEL COSTS		10,000		59,000		61,000		61,000		61,000	
<u>OTHER COSTS</u>											
		35,000		31,000		29,000		29,000		29,000	
TOTAL		45,000		90,000		90,000		90,000		90,000	

* Normally approximately 9 manmonths are contributed from 10422 during slack fire periods.

MAINTENANCE PROGRAM ANCHORAGE FIRE CONTROL - 10910

LOCATION & NAME	1965	1966	1967	1968	1969
HOMER OFFICE QTRS.	OIL LOGS	PAINT TRIM	OIL LOGS	PAINT INT.	PAINT TRIM
" GARAGE-WHSE	OIL LOGS	PAINT TRIM	OIL LOGS	----	PAINT TRIM
" LAWN	FERT.	RESEE & FERT.	----	FERT.	FERT.
" GAS-OIL HOUSE	OIL LOGS	PAINT TRIM	OIL LOGS	CHINK LOGS	PAINT TRIM
" WATER SYSTEM	----	REHAB.	----	----	----
" FURNACE	----	----	REHAB.	----	----
" ROAD	BLADE	RESURFACE	BLADE	BLADE	BLADE
" GAS PUMP	----	REHAB.	----	----	----
" WATER SOFTENER	----	----	REHAB.	----	----
" FENCE - LOG	----	OIL LOGS	----	OIL LOGS	----
" ELECTRIC SYSTEM	----	PLACE UNDERGRD.	----	----	----
" HOSEWASH RACK	PAINT	----	PAINT	----	PAINT
MCGRATH OFFICE QTRS.	BSMT. SEAL LKS	INTR. PAINT TR.	OIL LOGS	PAINT TRIM	OIL LOGS
" WAREHOUSE	OIL LOGS	INTR. PAINT TR.	OIL LOGS	PAINT TRIM	OIL LOGS
" CREW BARRACKS	OIL LOGS	INTR. PAINT TR.	OIL LOGS	PAINT TRIM	OIL LOGS
" GARAGE	OIL LOGS	INTR. PAINT TR.	OIL LOGS	PAINT TR.	OIL LOGS
" LAWN	FERTILIZE	RESEED & FERT.	FERTILIZE	FERTILIZE	FERTILIZE
" WATER SYSTEM	----	REHAB.	----	----	REHAB.
" FURNACES	ADJ & CLEAN	----	----	----	----
" HOSEWASH RACK	----	REPAIR & REHAB.	----	----	----
" ROADS	GRADING	SURFACE	SURFACE	SURFACE	SURFACE
FINGERLAKE WAREHOUSE	OIL LOGS	PAINT TRIM	OIL LOGS	PAINT TRIM	OIL LOGS
" GARAGE WHSE.	OIL LOGS	PAINT TRIM	OIL LOGS	PAINT TRIM	OIL LOGS
" ROADS	MAINTENANCE	RESURFACE	MAINTENANCE	MAINTENANCE	RESURFACE
" LAWN	FERT.	FERT.	FERT.	FERT.	FERT.
" WATER SYSTEM	----	REHAB.	----	----	REHAB.
" HOSEWASH RACK	PAINT & OIL	OIL	PAINT & OIL	OIL	PAINT & OIL
" DOCK	REP. & PAINT	REP. & PAINT	PAINT	PAINT	REP. & PAINT
LAKE LOUISE OFFICE QTRS.	OIL LOGS	PAINT TRIM	OIL LOGS	PAINT TRIM	OIL LOGS
" GARAGE WHSE.	OIL LOGS	PAINT TRIM	OIL LOGS	PAINT TRIM	OIL LOGS
" GAS OIL HOUSE	OIL LOGS	PAINT TRIM	OIL LOGS	PAINT TRIM	OIL LOGS
" WATER SYSTEM	PERM.	PERM. INST.	----	MAINT.	----

MAINTENANCE PROGRAM FAIRBANKS DISTRICT - 1091G

LOCATION & NAME	1965	1966	1967	1968	1969
FAIRBANKS F.C. OFFICE	PAINT EXT.	GEN. REPAIR	PAINT INT.	PAINT EXT.	GEN. REPAIR
" PARACHUTE LOFT	GEN. REPAIR	GEN. REPAIR	PAINT INT.-EXT.	GEN. REPAIR	GEN. REPAIR
" F.C. LOG RES.	PAINT EXT.	PAINT INT.	PAINT EXT.	PAINT INT.	PAINT EXT.
		ROOF REPAIR			
" F.C. MESS HALL	GEN. REPAIR	PAINT EXT.	DISPOSE	----	----
" F.C. WAREHOUSE	GEN. REPAIR	PAINT EXT.	GEN. REPAIR	PAINT INT.	GEN. REPAIR
" F.C. BOILERHOUSE	----	----	----	----	----
" F.C. GARAGE	PAINT EXT.	PAINT INT.	PAINT EXT.	GEN. REPAIR	PAINT INT.
" F.C. COLD STOR. #1	PAINT EXT.	GEN. REPAIR	GEN. REPAIR	PAINT EXT.	GEN. REPAIR
" F.C. COLD STOR. #2	PAINT EXT.	GEN. REPAIR	GEN. REPAIR	PAINT EXT.	GEN. REPAIR
" F.C. OIL HOUSE	PAINT EXT.	GEN. REPAIR	GEN. REPAIR	PAINT EXT.	GEN. REPAIR
" F.C. HOSE QUONSET	----	----	DISPOSE	----	----
" F.C. WHSE. QUONSET	----	----	DISPOSE	----	----
" F.C. COLD STOR. SHED	----	----	DISPOSE	----	----
" F.C. QUONSET	----	----	DISPOSE	----	----
" ENG. QUONSET	----	----	DISPOSE	----	----
" ENG. QUONSET	----	----	DISPOSE	----	----
" STRG. QUONSET	GEN. REPAIR	----	DISPOSE	----	----
" ADMN. WHSE.	GEN. REPAIR	PAINT EXT.	----	PAINT EXT.	PAINT INT.
" HEAT & WATER SYST.	GEN. REPAIR	GEN. REPAIR	GEN. REPAIR	GEN. REPAIR	GEN. REPAIR
" F.C. GAS DOCK	----	ROOF REPAIR	GEN. REPAIR	GEN. REPAIR	PAINT
		PAINT EXT.			
CHICKEN GAS & OIL	PAINT EXT.	----	PAINT EXT.	GEN. REPAIR	PAINT EXT.
DELTA WAREHOUSE	PAINT EXT.	PAINT EXT.	GEN. REPAIR	PAINT EXT.	GEN. REPAIR
" OFFICE QUARTERS	----	CLEAN FURNACE	PAINT EXT.	----	----
			PAINT INT.		
BUFFALO CENTER OFFICE QTRS.	----	PAINT EXT.	GEN. REPAIRS	----	DISPOSE
" OIL HOUSE	----	PAINT EXT.	GEN. REPAIRS	----	DISPOSE
CHICKEN WAREHOUSE	PAINT EXT.	----	PAINT EXT.	GEN. REPAIR	PAINT EXT.
TANAX GARAGE QUONSET	DISPOSE	----	----	----	----
TANAX WAREHOUSE	DISPOSE	----	----	----	----
TANAX GENERATOR HSE.	DISPOSE	----	----	----	----
TANAX GAS STORAGE	DISPOSE	----	----	----	----

MAINTENANCE PROGRAM FAIRBANKS DISTRICT - 10910 (CONT.)

LOCATION & NAME	1965	1966	1967	1968	1969
EAGLE OFFICE QTRS.	GEN. REPAIR	GEN. REPAIR	GEN. REPAIR	PAINT EXT. PAINT INT.	GEN. REPAIR
" WAREHOUSE	GEN. REPAIR	PAINT EXT.	-----	-----	-----
" GARAGE	GEN. REPAIR	PAINT EXT.	-----	PAINT EXT.	GEN. REPAIR
CHICKEN WAREHOUSE	DISPOSED	-----	-----	-----	-----
" OFFICE QUARTERS	GEN. REPAIR	PAINT EXT. FLOOR TILE	-----	PAINT INT.	PAINT EXT.
NORTHWAY CREW QUARTERS	GEN. REPAIR	GEN. REPAIR	PAINT EXT.	PAINT INT.	GEN. REPAIR
" WAREHOUSE	GEN. REPAIR	GEN. REPAIR	PAINT EXT.	PAINT INT.	GEN. REPAIR
" OIL HOUSE	DISPOSED	-----	-----	-----	-----
" OFFICE QUARTERS	DISPOSED	-----	-----	-----	-----
FT. YUKON OFFICE QTRS.	GEN. REPAIR	GEN. REPAIR	-----	DISPOSE	-----
" WAREHOUSE	-----	FOUNDATION	-----	DISPOSE	-----
CENTRAL OFFICE QTRS.	GEN. REPAIR	PAINT EXT.	PAINT INT.	GEN. REPAIR	PAINT EXT.
" WAREHOUSE	-----	GEN. REPAIR	-----	-----	DISPOSE
FAIRBANKS SJ TRAIN TWRS.	PAINT	-----	REPAIRS	PAINT	-----
TANAX OFFICE RES.	PAINT EXT.	PAINT INT.	-----	PAINT EXT.	GEN. MAINT.
FAIRBANKS ENTR. ROAD	GEN. MAINT.	GEN. MAINT.	GEN. MAINT.	GEN. MAINT.	GEN. MAINT.
" BOILER HOUSE	-----	PAINT INT. PAINT EXT.	-----	-----	PAINT INT. PAINT EXT.
" COLD STORAGE #3	-----	-----	CONSTRUCT	-----	PAINT EXT.
" MESS HALL	-----	CONSTRUCT	-----	PAINT INT.	PAINT EXT.
" WAREHOUSE	-----	-----	CONSTRUCT	GEN. REPAIR	PAINT EXT.
" GARAGE ADD.	-----	-----	CONSTRUCT	GEN. REPAIR	GEN. REPAIR
FT. YUKON OFFICE WHSE.	CONSTRUCT	-----	-----	GEN. REPAIR	GEN. REPAIR
TANAX OFFICE WHSE.	-----	-----	-----	CONSTRUCT	GEN. REPAIR
HUGHES OFFICE WHSE.	-----	-----	-----	CONSTRUCT	GEN. REPAIR
NORTHWAY POWER	-----	CONSTRUCT	-----	-----	GEN. REPAIR
TANAX GARAGE WHSE.	-----	-----	CONSTRUCT	-----	GEN. REPAIR
GALENA OFFICE QTRS.	-----	GEN. REPAIR	GEN. REPAIR	PAINT EXT. PAINT INT.	GEN. REPAIR

FIRE CONTROL CONSTRUCTION PROGRAM

<u>PROJECT</u>		<u>PREVIOUS</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>
CANTWELL OF-WH-QT	045	15,000					
ANCHORAGE STATION	038	46,000	400,000	631,000			
FAIRBANKS STATION	108	25,000		368,000	308,000	209,000	
MESS BARRACKS ADD.	095			250,000			
WAREHOUSE	096				273,000		
MAINT. GARAGE	098					125,000	
SEWAGE DISP.	105			98,000			
OFFICE ADD.	106					39,000	
PAVING	107					45,000	
OPEN STORAGE	097				35,000		
FIRE ALARM	094			45,000			
MCGRATH FILL	033	3,000		15,000			
MCGRATH WHSE.	005			1,000	42,000		
NORTHWAY PWR & BLDG.	104			3,000			
ESTER DOME LO	101			1,000	26,000		
GLENNALLEN WHS-LO	092			38,000	20,000		
TANACROSS WHS-GAR	099			1,000	37,000		
ANCHORAGE HGR	113			250,000			
HARDING LAKE LO	109				1,000	26,000	
TANANA OF-WH-GAR	102				2,000	52,000	
HUGHES OF-WH-GAR	103				2,000	52,000	
MCGRATH AIR WH	110				1,000	14,000	
PAXSON OF-WH-GAR	111					1,000	37,000
CANTWELL OIL-GAS	047				2,000		
CANTWELL SEW-WAT	046				10,000		
BORDER INFO SITE	300			2,000			
FORT YUKON		32,886					
GALENA		38,254					
BETHEL		32,256					

ACCELERATED CONSTRUCTION PROGRAM

	TOTAL COST	TOTAL MM	UNDERTAKEN WITHIN	
			3 TO 6 MONTHS	MONTHS DURATION
ANCHORAGE FIRE CONTROL STATION	1,000,000	250	X	5
FAIRBANKS UTILIDOR	60,000	20	X	2
FAIRBANKS GARAGE ADDITIONS	75,000	60	X	3
FAIRBANKS WAREHOUSE BARKS	305,000	150	X	6
FAIRBANKS MESS HALL - OFFICE	168,000	160	X	6
BIG DELTA BARKS	46,000	35	X	4
LAKE LOUISE G & O HOUSE	2,000	5	X	2
GALENA FCA	36,000	5	X	2
NORTHWAY G & O HOUSE	2,000	5	X	2
CENTRAL G & O HOUSE	9,000	5	X	3
MCGRATH YARD FILL & GARAGE FLOOR	15,000	12	X	4
CANTWELL SEWER, WATER, OIL & GAS HOUSE	13,000	12	X	4
MCGRATH WHSE. ADDITION	30,000	24	X	6
HUGHES OFFICE WAREHOUSE, GARAGE	55,000	36	X	6
CENTRAL WAREHOUSE, GARAGE	35,000	24	X	6
TANACROSS WAREHOUSE, GARAGE	35,000	24	X	6
GLENALLEN WAREHOUSE	20,000	12	X	4
NORTHWAY POWER HOUSE	2,000	¼	X	1
BIG DELTA BARRACKS HYDRANT SUP.	45,000	24	X	5
BETHEL OFFICE-WAREHOUSE GAR.	40,000	24	X	5
DILLINGHAM OFFICE WAREHOUSE	40,000	24	X	6
MCGRATH CREW BARRACKS AND MESS	65,000	36	X	6

VI. INVENTORY FLOW DURING A FIRE SEASON

I PRE-SEASON

1. Based on funds and program levels, a NUS (Normal Unit Strength) is established for each Fire District.
2. Regular 10422 funds are used to acquire programmed NUS requirements.

II FIRE SEASON

A. First Fires

1. The season begins and the normal development in severity, frequencies, etc., occurs. Fires are fought within limits of strength of the programmed organization.
2. As season advances, and frequency and severity increase, fire control requires use of (10800) emergency funds for labor, supplies, services, etc.
3. Equipment is depleted, reports made of losses, replacement requisitions are placed against 10800 funds, and charges made against specific fires involved.
4. Theoretically, the NUS is thus currently maintained at all times.
5. 10800 emergency funds expenditures are often the only ones made directly against specific fires at time of requisition.

B. C/C 4 or Better

1. Even without fires, the fire danger may be high and, as per strength of force plan, the F.C.O.'s can incur 10800 emergency fund expenditures in prevention and/or suppression. This can be the hiring of standby crews, or the pre-fire-occurrence purchase of equipment and supplies which will be needed if current fire danger conditions continue.
2. Such purchases may be necessary because current warehouse tool levels are depleted due to unreplaced losses, current fire issues, or the programmed NUS is not adequate to meet anticipated severity levels.
3. Such purchases are "10800 State General". They are not charged to specific fires.

4. Such purchases when received are immediately conditioned, packaged and stored for immediate issue to fires.
5. Borate stocks can be so bought and held under "State General" and charged out to specific fire as used.

C. Large Fires

1. When project fires are under way, the F.C.O. may make frequent or periodic 10800 purchases: to reflect estimated current losses; to allow for greater manning of the fire; or to provide warehouse cushion against other fire build-up demands.
2. Such purchases may be for use on a specific fire and are therefore charged to it; others may be made due to the fire, but are actually purchased to hold up warehouse utility levels for other fires (existing or anticipated). In such cases, purchases are for "10800 State General".
3. Equipment removed from a State Cache to a District is charged to the specific fire at the time of transfer.

III DISTRICT INVENTORY

1. The pre-season NUS plus 10422 purchases during season equals the total unit strength or new NUS to be on hand at end of season. Losses suffered during season are replaced by 10800 emergency fund purchases.
2. Fall inventory is made and if less than NUS is at hand (inventory plus undelivered requisitions), 10800 purchases should be made promptly.
3. If equipment requirements exceed the programmed NUS, the excess will be moved to the State Cache.
4. As long as the NUS is at hand, no further 10800 purchases should be made, even though last warehouse check sheets show fire losses. Such losses are of 10800 purchased tools and are never replaced by 10800 purchases after the fire build-up abates.
5. The F.C.O. must use best judgment in correlating current inventories, abatement of fire season, tool losses, etc., to determine when to cease submitting post-fire replacement tool orders, and when to hold "loss claims" for a cumulative, "balancing", end-of-season, final loss order.

IV STATE CACHES

1. State Caches (bust houses, or reserves) are located at Anchorage and Fairbanks.
2. State Caches function as an equipment reserve. They are authorized only as a holding area for District 10800 purchases in excess of NUS requirements and 10800 State-General purchases.
3. As equipment is needed by the District it is drawn from the State Cache; all 10800 State-General purchases are placed in the State Cache. At season's end, District supply and equipment in excess of NUS requirements are returned to the State Cache.
4. Surpluses can be carried in three ways: a) planned 10422 equipment purchases of the Districts can be obtained by moving tools to District and making fund transfer on District ledgers; b) as in a) less a fund transfer; c) carry equipment over and use the following season--not replacing losses until NUS level is reached.
5. Basically, only the State can legitimately carry over excess 10800 purchases. Only the State can make the original "10800 State General" purchase. The Districts make specific fire purchases.

TABLE 19

STATE TOOL & FUND FLOW

